

Additive and Subtractive Spaces

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Abstract: Most of the spaces are used only for a primary function and left unused for major time of the day. The present study focuses on scope, possibility and application of additive and subtractive spaces on a developing city through its planned development to avoid future problems which we are facing in the cities regarding land usage, business activities, health facilities, education and skill development facilities and social interactions in India and thus making the development significant and economic.

Keywords: Additive and subtractive spaces, urban spaces, sustainable land usage, economical space usage.

1. Introduction

The chief attribute of modern city is multitude spaces. To serve a primary function much of the spaces are unoccupied for a large amount of time ranging from diurnal to annual cycles. This is leading to more land usage which gradually leads to lesser area for nature and agriculture. This also leads to space congestion which affects the use of land, area required by citizen for daily activities, space for refreshment, traffic congestion, etc. Buildings serving only for a primary function also leads to the underutilization of that built up space. This century has witnessed brisk change in faction of population as the reason is diverse ranging from search of employment as it is the influence of globalization. With growth in the citizenry and management of accessible land has poses a challenge for the communities. The limited spaces promote the maximum utilization of the resources. In developing countries like India, it is desirable to develop models in almost all phases of life including land usage which are not only economic but also providing comfort within reach of large population. Additive and subtractive spaces are the one which are multi-functional, which has various function on the basis of need of an hour, on daily or annual situation. This can function as variable activities can be clubbed in a building for different time period. Thus, these additive and subtractive spaces can be an approach to effective utilization to a building stock which can save many meters of avoidable construction, contributing to resource and space conservation. Hence it is an economic and sustainable futuristic approach. The spaces in this methodology propose a lesser use of resources affecting the cost of land, construction, material, manufacture. It also results in affecting the primary stages of built up space from manufacturing of material, transportation (till the finished product obtained) and thus not disturbing our natural resources. People today are more focused

on individual living then living in a community which is part of our cultural history; these spaces thus will also help in interaction of different kind of users in the transition period of their change of activity, and also among the visitors of the area, creating a hub for human interaction. Additive and subtractive spaces can bring a sense of ownership among the people for the space thus; it can be taken care off every time of the day.

- Type of additive and subtractive spaces: There are different types of spaces that can be used as additive and subtractive spaces.
- Buildings a part can be used as dwelling units, or summer school, again wadis, for exhibitions, health checkups, or workshops, etc, for different activity for different time of the day.
- Schools apart from the school timing can have summer school, exhibition Centre, workshops, for community gathering, etc.

2. Advantages

A. Optimum and Minimum Land Usage

Additive and subtractive spaces will help limit the land usage in different activities as it would not be additionally used but will be inculcated into the same building reducing the additional land usage and making the minimum and optimum land usage. For example, if a street is used for market in the morning hours and later as food street than it would help to reduce the extra area that food street would have required.

B. Economic and Sustainable Use of Land and Building

Economic and sustainable usage of spaces, as multifunctional and time-sharing activities takes place at a single space. Lesser use of materials and resources would make more sustainable use of the land and will be economic for the investor and helping to save the local resources including human resources to a greater extent. The cost-effective development will fetch expansion and possibility of newer advanced facilities to the citizen. It can also help in revenue generation.

C. Social interaction

Additive and subtractive space will increase interaction between the various users during the transition period of their change of activity. Cities now a day central spaces for interaction, as it used to be in the earlier days of making of cities

for meetings, gathering, and interaction.

3. Survey analysis

According to a survey conducted on what according to people can be possible problems and advantages of additive and subtractive spaces and whether according to them such additive and subtractive spaces are possible or not, the pie chart in Fig.1 shows that 100% people thought that spaces are possible among which 70.5% thought it is possible only with proper management.

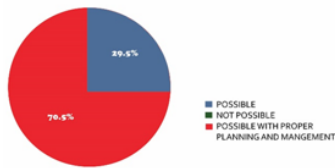


Fig. 1. Possibility of additive and subtractive space according people in survey

Mentioned below are the possible problems and solutions according to the study and survey conducted.

4. Possible problems

- Additive and subtractive spaces can only be possible with proper arrangement of activities including cleaning of the space in the transition time and proper management of timing, but, lacking this it can ruin both functions and experience of the space, with a proper management team, the place can run accurately, which would require share of all the user using the space for different hours.
- It mostly depends on the usage of a space whether it is positively or negatively used by the users if not taken care in some cases people can destroy the property owned by earlier person within the space such as furniture thus it would require more focus by fellow user over each other properties.
- In some cases, to perform different activities one would have to take permission from multiple people or authority using the same place for e.g. in case of a government building, etc. This can be taken care by assigning the maintenance of the place to a single authority or person or a team. The space under any political issues cannot be used as additive and subtractive space.

5. Solutions

- With the initial stages of the making the additive and subtractive space to operate accurately a management team

can be made which can look after the drawbacks in any tasks like cleanliness and time management and scheduling of the various activities and gradually with discussions and meetings performance of the space can be taken care of. With daily use the space will gradually evolve, activities and functions will suitably adjust and lead to a successful functioning of additive and subtractive spaces. Timing of each activity has to be particularly taken care of, to avoid mismanagement and only activities with practical scope should be performed together in the same building.

- If the concept of additive and subtractive space is taken into account during the designing stage of a building or space it will help to make the space more functional maintaining its feel.
- With sharing of a single space among various users it would lead to better understanding within, sense of ownership leading to better control over the place with responsibility. This will also generate inter dependency and thus better support and communication. This concept can also help to provide more activities to be performed by members of a society or colony leading to better communication and understanding between neighbors.

6. Conclusion

India today is one of most and fastest developing country in the world but has limited land and resources. Steps need to be taken so that land and resources are wisely used to make the maximum out of them without disturbing the nature so it helps the country to develop technically and culturally. Under smart city development schemes many cities are taking a new shape in urban context, many parks, riverfronts, renovation of old buildings and spaces for social gathering are being developed, thus inculcating the idea of additive and subtractive spaces in such spaces can help to make the maximum use of the land and human resource of the city. Old cities with abandoned building taking up area with little maintenance can be converted into additive and subtractive space can then be used for the needy people or for any other multiple purposes. Areas under flyover are also mostly wasted tasks like summer schools, public, weekly haats, temporary dwellings for needy can be inculcated in that area. Skill development centre can also be developed. Villages and smaller towns also, with such spaces can have multiple activities at the same space and sharing a rent among the users.

References

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